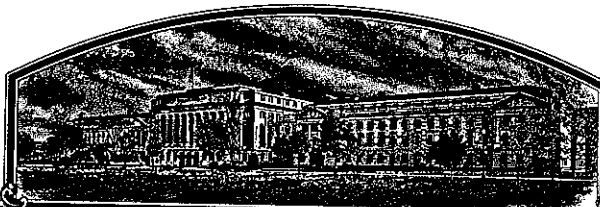


No.



8500005

# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Asgrow Seed Company*

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (1930, 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CORN

'6103'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 31st day of October in the year of our Lord one thousand nine hundred and eighty-five.

Attest:

*Kenneth H. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*John R. Block*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

APPROVAL EXPIRES 4-30-85

FORM APPROVED: OMB NO. 0581-0055

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Asgrow Seed Company		2. TEMPORARY DESIGNATION		3. VARIETY NAME 6103	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) (9620 190 25) Gull Road Kalamazoo, MI 49001		5. PHONE (Include area code) (616) 385-6605		FOR OFFICIAL USE ONLY VPPO NUMBER 8500005	
6. GENUS AND SPECIES NAME Zea Mays L.		7. FAMILY NAME (Botanical) Gramineae		FILING DATE 10-3-84 TIME 8:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Field Corn		9. DATE OF DETERMINATION October 1983		FEE RECEIVED AMOUNT FOR FILING \$ 1,800 DATE 10/3/84 AMOUNT FOR CERTIFICATE \$ 200 DATE 9/9/85	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware	
12. DATE OF INCORPORATION March 22, 1968					
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Asgrow Seed Company Mr. John A. Batcha 9620 190 25 Gull Road Kalamazoo, MI 49001 (616) 385-6605 PHONE (Include area code):					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.) b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.) d. <input type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified			
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? Yes, Hybrid produced from this inbred offered for sale October 17, 1983. <input checked="" type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT John A. Batcha				DATE September 28, 1984	
SIGNATURE OF APPLICANT				DATE	

Asgrow Seed Company  
PVP Application - Corn 6103  
September 28, 1984

**EXHIBIT A**  
**ORIGIN AND BREEDING HISTORY**

All breeding work was done at Asgrow's Midwest Breeding Station at Oxford, Indiana.

1973 -- crossed 10631 x A632 and RB14AHtA x RB14AHtB. 10631 is an Asgrow inbred, the other three inbreds are public inbreds.

1974 -- 10631 x A632 was crossed with RB14AHtA x RB14AHtB.

1975 -- the doublecross (10631 x A632) (RB14AHtA x RB14AHtB) was self-pollinated.

1976 -- S<sub>1</sub> grown, 25 S<sub>2</sub> ears were saved.

1977 -- 25 S<sub>2</sub> ear-to-row selections grown. 6103 traces to one plant that was selected in one of these rows.

1978 -- not grown.

1979 -- S<sub>3</sub> ear-to-row selection grown; an S<sub>4</sub> bulk was saved.

1980 -- S<sub>4</sub> bulk grown; 10 single ear selections were saved.

1981 -- grew 10 S<sub>5</sub> ear-to-row selections; 5 rows were saved based on interrow and intrarow uniformity; a total of 25 single ears were saved from these 5 rows.

1982 -- grew 25 S<sub>6</sub> ear-to-row selections; further selection was made for uniformity. A total of 25 single ears were saved from 5 of the S<sub>6</sub> rows.

1983 -- grew 25 S<sub>7</sub> ear-to-row selections. Seed from all 25 rows was saved and bulked. A total of 32 single ears from 4 of these rows were saved for further breeder's seed increases.

6103 was noted to be quite uniform as early as 1980. 6103 is very stable since little variation has been observed when comparing ear-to-row selections in 1981, 1982, and 1983.

Observations indicate 6103 is uniform and stable within commercially acceptable limits. As is true with other corn inbreds, a small percentage of offtypes or variants can occur within commercially acceptable limits for almost any characteristic during the course of repeated multiplication.

b:6103corn.ex  
mga

Exhibit B  
NOVELTY STATEMENT

8500005

To our knowledge, the corn inbred most similar to 6103 is B14Aht. Characteristics which make 6103 a different inbred include, but are not necessarily restricted to, the following:

<u>Plant Height</u>	<u>Mean Height (in cm.) for 25 plants</u>	
1983...Oxford, Indiana rep 1	<u>6103</u> 180	<u>B14Aht</u> 205
1984...Oxford, Indiana rep 1	195	240
rep 2	195	230
rep 3	200	230

<u>Ear Height</u>	<u>Mean Height (in cm.) for 25 plants</u>	
1983...Oxford, Indiana rep 1	<u>6103</u> 75	<u>B14Aht</u> 80
1984...Oxford, Indiana rep 1	66	85
rep 2	80	90
rep 3	75	82

<u>No. of Tassel Branches</u>	<u>Mean of 20 plants</u>	
1983...Oxford, Indiana rep 1	<u>6103</u> 15	<u>B14Aht</u> 11
1984...Oxford, Indiana rep 1	17	9
rep 2	15	13
rep 3	15	13

FORM GR-470-28  
(2-15-74)UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
GRAIN DIVISION  
HYATTSVILLE, MARYLAND 20782EXHIBIT C  
(Corn)OBJECTIVE DESCRIPTION OF VARIETY  
CORN (ZEA MAYS)

NAME OF APPLICANT(S)

Asgrow Seed Company

FOR OFFICIAL USE ONLY

PVPO NUMBER

8500005

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

Mr. John A. Batcha  
9620 190 25 Gull Road  
Kalamazoo, MI 49001VARIETY NAME OR TEMPORARY  
DESIGNATION

6103

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g.  or ) when number is either 99 or less or 9 or less.

## 1. TYPE:

1 = SWEET

2 = DENT

3 = FLINT

4 = FLOUR

5 = POP

6 = ORNAMENTAL

## 2. REGION WHERE BEST ADAPTED IN THE U.S.A.:

1 = NORTHWEST

2 = NORTHCENTRAL

3 = NORTHEAST

4 = SOUTHEAST

5 = SOUTHCENTRAL

6 = SOUTHWEST

7 = MOST REGIONS

## 3. MATURITY (In Region of Best Adaptability):

(Under "omments" (pg. 3) state how  
heat units were calculated)

DAYS FROM EMERGENCE TO 50% OF PLANTS IN SILK

HEAT UNITS

DAYS FROM 50% SILK TO OPTIMUM EDIBLE QUALITY

HEAT UNITS

DAYS FROM 50% SILK TO HARVEST AT 25% KERNEL MOISTURE

HEAT UNITS

## 4. PLANT:

CM. HEIGHT (To tassel tip)

CM. EAR HEIGHT (To base of top ear)

CM. LENGTH OF TOP EAR INTERNODE

## Number of Tillers:

1 = NONE

2 = 1-2

3 = 2-3

4 = &gt; 3

## Number of Ears Per Stalk:

1 = SINGLE

2 = SLIGHT TWO-EAR TENDENCY

3 = STRONG TWO-EAR TENDENCY 4 = THREE-EAR TENDENCY

## Cytoplasm Type:

1 = NORMAL

2 = "T"

3 = "S"

4 = "C"

5 = OTHER (Specify) \_\_\_\_\_

## 5. LEAF (Field Corn Inbred Examples Given):

## Color:

1 = LIGHT GREEN (HY)

2 = MEDIUM GREEN (WF9)

3 = DARK GREEN (B14)

4 = VERY DARK GREEN (K166)

## Angle from Stalk (Upper half):

1 = &lt; 30°

2 = 30-60°

3 = &gt; 60°

## Sheath Pubescence:

1 = LIGHT (W22)

2 = MEDIUM (WF9)

3 = HEAVY (OH26)

## Marginal Waves:

1 = NONE (HY)

2 = FEW (WF9)

3 = MANY (OH7L)

## Longitudinal Creases:

1 = ABSENT (OH51)

2 = FEW (OH56A)

3 = MANY (PA11)

## Width:

CM. WIDEST POINT OF EAR NODE LEAF

## Length:

CM. EAR NODE LEAF

NUMBER OF LEAVES PER MATURE PLANT

## 6. TASSEL:

NUMBER OF LATERAL BRANCHES

Branch Angle from Central Spike:

1 =  $< 30^\circ$ 2 =  $30-40^\circ$ 3 =  $> 45^\circ$ 

Penduncle Length:

CM. FROM TOP LEAF TO BASAL BRANCHES

Pollen Shed:

1 = LIGHT (WF9)

2 = MEDIUM

3 = HEAVY (KY21)

Anther Color:

1 = YELLOW

2 = PINK

3 = RED

4 = PURPLE

5 = GREEN

Glume Color:

6 = OTHER (Specify)

Green and Purple

Pollen Restoration for Cytoplasms (0 = Not Tested, 1 = Partial, 2 = Good)

"T"

"S"

"C"

OTHER (Specify Cytoplasm and degrees of restoration)

## 7. EAR (Husked Ear Data Except When Stated Otherwise):

CM LENGTH

MM. MID-POINT  
DIAMETER

GM. WEIGHT

Kernel Rows:

1 = INDISTINCT

2 = DISTINCT

NUMBER

1 = STRAIGHT

2 = SLIGHTLY CURVED

3 = SPIRAL

Silk Color (Exposed at Silking Stage):

1 = GREEN

2 = PINK

3 = SALMON

4 = RED

Husk Color:

FRESH

1 = LIGHT GREEN

2 = DARK GREEN

3 = PINK

DRY

4 = RED

5 = PURPLE

6 = BUFF

Husk Extention: (Harvest Stage)

1 = SHORT (Ears Exposed) 2 = MEDIUM (Barely Covering Ear)

3 = LONG (8-10CM Beyond Ear Tip)

4 = VERY LONG ( $> 10$  CM)

Husk Leaf:

1 = SHORT ( $< 8$  CM)

2 = MEDIUM (8-15 CM)

3 = LONG ( $> 15$  CM) (1) See back page of Exhibit C.

Shank:

CM LONG

NO. OF INTERNODES

Position at Dry Husk Stage:

1 = UPRIGHT

2 = HORIZONTAL

3 = PENDENT

Taper:

1 = SLIGHT

2 = AVERAGE

3 = EXTREME

Drying Time (Unhusked Ear):

1 = SLOW

2 = AVERAGE

3 = FAST

## 8. KERNEL (Dried):

Size (From Ear Mid-Point):

MM LONG

MM. WIDE

MM. THICK

Shape Grade (% Rounds)

1 =  $< 20$ 2 =  $20-40$ 3 =  $40-60$ 4 =  $60-80$ 5 =  $> 80$

## 8. KERNEL (Dried) :

Pericarp Color: 1 = COLORLESS 2 = RED-WHITE 3 = TAN 4 = BRONZE  
5 = BROWN 6 = LIGHT RED 7 = CHERRY RED  
8 = VARIEGATED (Describe) \_\_\_\_\_

Aleurone Color: 1 = HOMOZYGOUS 2 = SEGREGATING (Describe) \_\_\_\_\_

1 = WHITE 2 = PINK 3 = TAN 4 = BROWN 5 = BRONZE 6 = RED  
7 = PURPLE 8 = PALE PURPLE 9 = VARIEGATED (Describe) \_\_\_\_\_

Endosperm Color: 1 = WHITE 2 = PALE YELLOW 3 = YELLOW 4 = PINK-ORANGE 5 = WHITE CAP.

## Endosperm Type:

1 = SWEET (su1) 2 = EXTRA SWEET (sh2) 3 = NORMAL STARCH 4 = HIGH AMYLOSE STARCH  
5 = WAXY STARCH 6 = HIGH PROTEIN 7 = HIGH LYSINE 8 = OTHER (Specify) \_\_\_\_\_

GM. WEIGHT /100 SEEDS (Unsize Sample)

9. COB: 25 R/S 1/30/85

MM. DIAMETER AT MID-POINT

## Strength:

1 = WEAK 2 = STRONG

## Color:

1 = WHITE 2 = PINK 3 = RED 4 = BROWN  
5 = VARIEGATED 6 OTHER (Specify) \_\_\_\_\_

## 10. DISEASE RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="text" value="0"/> STALK ROT (Diplodia)	<input type="text" value="0"/> STALK ROT (Fusarium)	<input type="text" value="0"/> STALK ROT (Gibberella)
<input type="text" value="2"/> NORTHERN LEAF BLIGHT	<input type="text" value="0"/> SOUTHERN LEAF BLIGHT	<input type="text" value="0"/> SMUT
<input type="text" value="0"/> SOUTHERN RUST	<input type="text" value="0"/> CORN SMUT	<input type="text" value="0"/> BACTERIAL WILT
<input type="text" value="0"/> BACTERIAL LEAF BLIGHT	<input type="text" value="0"/> MAIZE DWARF MOSAIC	<input type="text" value="0"/> STUNT
<input type="text" value=""/> OTHER (Specify) _____		

## 11. INSECT RESISTANCE (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

<input type="text" value="1"/> CORNBORER	<input type="text" value="0"/> EARWORM	<input type="text" value="0"/> SAPBEETLE	<input type="text" value="1"/> APHID
<input type="text" value="0"/> ROOTWORM (Northern)	<input type="text" value="0"/> ROOTWORM (Western)		
<input type="text" value="0"/> ROOTWORM (Southern)	<input type="text" value="0"/> OTHER (Specify) _____		

## 12. VARIETIES MOST CLOSELY RESEMBLING THAT SUBMITTED FOR THE CHARACTERS GIVEN:

CHARACTER	VARIETY	CHARACTER	VARIETY
Maturity	B14Aht	Kernel Type	B14Aht
Plant Type	B14Aht	Quality (Edible)	
Ear Type	B14Aht	Usage	B14Aht

## REFERENCES:

U.S. Department Agriculture. Yearbook 1937.  
Corn: Culture, Processing, Products. 1970 Avi Publishing Company, Westport, Connecticut. (Numerous Authors)  
Emerson, R.A., G.W. Beadle, and A.C. Fraser. A Summary of Linkage Studies in Maize. Cornell A.E.S., Mem. 180. 1935.  
The Mutants of Maize. 1968. Crop Science Society of America. Madison, Wisconsin.  
Stringfield, G.H. Maize Inbred Lines of Ohio. Ohio A.E.S. Bul. 831. 1959.  
Butler, D.R. 1954 - A System for the Classification of Corn Inbred Lines - PhD. Thesis, Ohio State University.

## COMMENTS:

G.D.D. was recorded with Hidy-Brown Degree Day Recorder Max. = 86° Min = 50°

OVER - R/S

6

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In 1984 6103 was observed to exhibit variation in husk leaf length. 5% of plants had husks 8-10 cm in length and the remainder had 0-7 cm length. This characteristic is influenced by environmental conditions such as stress, and can change from year to year.

Asgrow Seed Company  
PVP Application - Corn 6103  
September 28, 1984

8500005

**EXHIBIT E**

**Statement of the Basis of Applicant's Ownership**

6103 was originated and developed by Quinton J. Raab, an Asgrow Plant Breeder. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.

mga  
b:6103corn.ex